

WHAT IS CLAIMED IS:

1. An interlock arrangement for controlling selected functions of a body having power components and having a closable door, a latch, a latch striker engageable by the latch, the door having a closed position wherein the latch engages the latch striker, a sensor adjacent to one of the latch and the latch striker, a sensor actuator adjacent to the other of the latch and the latch striker, the sensor providing a signal indicating the door is closed when the latch is adjacent to the latch striker to thereby enable the selected functions.

2. The interlock arrangement of claim 1, wherein the door is on a vehicle entrance opening, the sensor including a first element mounted on the latch, and a second element mounted on the latch striker to provide the signal when the latch is adjacent the striker.

3. The interlock arrangement of claim 2, wherein one of the sensor elements comprises a magnet, and the other sensor element is magnetic field sensitive to provide a signal when in presence of a magnetic field.

4. The interlock arrangement of claim 3, wherein said other sensor element comprises a magnetic reed switch.

5. The interlock arrangement of claim 1, wherein the sensor comprises a Hall effect sensor and the sensor actuator comprises a magnet in position to change the state of the Hall effect sensor when the door is closed.

6. The interlock arrangement of claim 1, wherein the sensor includes a magnet component and a magnetic field sensitive component, one of the components being mounted on the door adjacent to the latch and the other component mounted on the striker.

7. The interlock arrangement of claim 1 wherein the latch is mounted on the door and the striker is mounted on the body.

8. A loader having a frame, a drive to move the frame, a lift arm on the frame, a lift actuator for raising and lowering an outer end of the lift arm, a cab structure on the frame, an operator door for permitting entrance and egress from the cab, said door being hingedly mounted on the cab, a door latch, and a latch striker for the latch, said latch engaging the latch striker to hold the door closed, wherein the improvement comprises a sensor arrangement between the door and a portion of the cab adjacent the door opening, and a lockout for enabling and disabling operating functions, said sensor

arrangement being connected to the lockout to disable the functions when the sensor arrangement indicates the door and the portion of the cab are positioned in an offset relationship.

9. The loader of claim 8, wherein said lockout comprises a lockout valve for hydraulic functions.

10. The loader of claim 8, wherein said sensor arrangement comprises a two component sensor, a first component being a magnetic sensitive component, and the second component comprising a magnet, and one of the components being mounted on the door and the other component being mounted on the portions of the cab.

11. The loader of claim 10 wherein the door latch is mounted on the door and the portion of the cab comprise the latch striker mounted on the cab in portions to be engaged by the door latch when the door is closed.

12. The loader of claim 8, wherein said sensor arrangement comprises a magnetic sensor on the latch, said sensor being positioned to sense a magnetic field from a magnet mounted on the portion of the cab when engages the striker.

13. The loader of claim 8, wherein latch striker comprises the portion of the cab, the sensor

arrangement comprising a switch carried on the door latch, and a switch actuator carried on the striker, said switch being a normally closed switch connected in a circuit for the lockout, the switch being opened when the door is closed and the latch is engaging the striker, a circuit connector from the switch to the lockout, the lockout being carried on the loader frame, the connector being separable to leave the circuit open when the door is removed from the loader frame and the circuit, the lockout being operable to enable the operating functions when the circuit is open.

14. The loader of claim 13, wherein said lockout comprises a lockout valve that is normally open, and a controller for the lockout valve to receive the signals from the sensor arrangement.

15. An interlock arrangement for controlling operation of power components on a powered vehicle, said vehicle having an operator access opening, and a door for closing the access opening, the door having a closed position wherein the door is positioned out of a zone of movement of power components, a latch having first and second latch components, the first latch component being mounted on the door, and the second latch component being mounted on the vehicle, the first and second latch components mating to hold the door in its closed and latched position, a sensor for enabling operation of at least one power component and having a

first sensor element mounted adjacent the first latch component, and a second sensor element mounted adjacent the second latch component, said first and second sensor elements sensing the position of the door and providing a signal only when the door is in its closed position to enable operation of the at least one power component.

16. The interlock system of claim 13, wherein the first sensor element comprises a switch, and the second sensor element comprises a switch actuator.

17. The interlock system of claim 16, wherein the first sensor element is a magnetic field sensitive switch, and the second sensor element is a magnetic field producing element.

18. The interlock system of claim 17, wherein said magnetic field sensitive element is mounted on the door latch, and the magnetic field producing element is mounted on the vehicle.

19. The interlock system of claim 17, wherein said second latch component on the vehicle comprises a latch striker.

20. The interlock system of claim 19, wherein said first sensor element is a magnetic field sensitive

-17-

switch and the second sensor element is mounted on the striker and is a permanent magnet.